

Most of the data accumulated has been from reactions seen in the glomeruli with igc antiserum, noting either a linear or a granular staining pattern. The basic assumption is that with a linear staining along the glomerular loops one has a disease process with an antibody directed against the glomerular membranes, whereas a lumpy or granular pattern suggests an immune complex disease with the complexes "caught" in the glomerulus. In Goodpasture's disease, rapid progressive glomerulonephritis, and nephropathy with burns, there may be a linear deposit of igc; while in systemic lupus erythematosus, carcinomatous nephropathy, malaria, and post-streptococcal nephritis, a granular pattern may be seen. Complement antiserum is useful because sometimes it is the only protein found in the glomerulus and from its pattern, or in conjunction with igc staining, the disease process can be better defined. Fibrinogen is found in many of the above diseases but is predominate in the renal disease associated with toxemia of pregnancy. In transplantation the linear pattern may herald problems because of an antiglomerular membrane antibody. If pyelonephritis is suspected, fluorescein-tagged antisera against bacterial antigens can be used to detect culture-negative pyelonephritis.

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Pituitary Hormone Assay

The concentrations of all major human anterior pituitary hormones in serum can now be determined specifically and precisely by radioimmunoassay. With few exceptions, anterior pituitary function should be evaluated directly by radioimmunoassay of hormones in serum rather than by bioassay of urinary excretory products, etc. Reagents for radioimmunoassay of luteinizing hormone, follicle stimulating hormone and growth hormone (GH) are available commercially and the

methods are being established in many clinical laboratories. Recent studies indicate that human prolactin also exists distinct from GH and radioimmunoassays have already been developed for this hormone. Human prolactin appears to be secreted primarily in late pregnancy and in association with lactation. Development of similar radioimmunoassays for low molecular weight agents related to pituitary function (steroids, prostaglandins, cyclic AMP and hypothalamic releasing factors) are progressing rapidly and should result in quantum jumps in our understanding of hormonal regulation of bodily function.

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Implication of Epstein-Barr Virus in Human Disease

The Epstein-Barr virus (EBV) is a herpes-like virus initially reported by Epstein and Barr in continuous lymphoblastic cell cultures derived from Burkitt lymphomas. The observation of elevated antibody titers in patients with variable diagnoses including infectious mononucleosis, Burkitt's lymphoma, nasopharyngeal carcinoma, Hodgkin's disease and lymphocytic leukemia has raised the possibility that this virus may be the etiologic agent in these diseases. No direct evidence, however, has been presented to substantiate this possibility. Furthermore, serological studies have shown that the virus may be common in the general population, particularly in the low socio-economic groups.

It is postulated that after EBV infection, the virus remains inactive until another factor alters the apparent steady state of the host, and replication and antibody production then occurs. In infectious mononucleosis the EBV antibodies are demonstrated at about the same time as the heterophile antibodies and may persist indefinitely, unlike the heterophile antibody levels which